

EXHIBIT A

ALAN CAVALLERANO

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SUMMARY OF QUALIFICATIONS

Video industry veteran with over twenty years of experience in Video R&D, Product Development, Technical Writing, and Patents. President of own Consulting business, ACE Consulting. Clients include top world-renowned digital video and home theater product developers and IP firms. Expertise in digital and analog video product development, product management, IP, and product evaluation & test.

WORK EXPERIENCE

ACE Consulting

February 2003 - Present

Bedford, NY
Video Consulting business

President

- ☐ Started own Video Consulting business
- ☐ Assist attorneys with IP mining, evaluation, patent infringements, expert reports
- ☐ Assist companies with Video Product development, product architectures, product features & functions, product specifications, product roadmapping, key component selection
- ☐ Technical writer, generate product & industry specifications, product manuals, product line catalogs
- ☐ Technical training and product marketing
- ☐ Product testing, video quality evaluations, objective and subjective test plans and analysis

Clients include the following top companies in the field:

- ☐ Top IP law firms
- ☐ Harman Specialty Group, a division of Harman Kardon / Harman International
- ☐ THX, Ltd.
- ☐ Key Digital Systems
- ☐ GE Licensing
- ☐ ThinkFire
- ☐ Philips
- ☐ FuelCell Energy

Philips Electronics North America

1985 – January 2003

Briarcliff Manor, NY
Video Engineering, R&D, Product Development, IP, Documentation

Provided direct system-level Video R&D in various roles of increasing responsibility. Very active in building the Philips patent portfolio for digital television. Strong technical, Project Management, and written/oral communication skills.

- ☐ **PHILIPS SEMICONDUCTORS** 2001 – 2003
Project Manager
 - Initiated and then led all Predevelopment data analysis activities related to system performance of set-top box products
- ☐ **PHILIPS CONSUMER ELECTRONICS** 1998 – 2000
Project Manager
 - Technical project management developing advanced set-top box products for Philips
 - System and product architectures, features & functions, product roadmapping

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- **PHILIPS RESEARCH LABORATORIES** 1993 – 1997
Principal Member of Research Staff
Manager of Technical Communications
 - Writer and editor for all digital television technical documentation and patents
 - Key architect for “Grand Alliance” digital HDTV system
 - Expert in the field of ATSC, digital TV, and MPEG; video post-processing and display enhancement
- **PHILIPS RESEARCH LABORATORIES** 1985 – 1992
Senior Member of Research Staff & Project Leader (1988 – 1992)
Member of Research Staff (1986 – 1987)
Senior Research Associate (1985)
 - Pioneer in the field of simulcast terrestrial and cable HDTV systems implemented for the FCC:
 - Led project teams of more than 15 engineers and support personnel
 - Basic research in the area of video processing algorithms for data compression and picture enhancement, taking advantage of aspects of the human visual system

CBS Technology Center

1982 – 1985

Stamford, CT

Video Engineering, Advanced Television Research Department

Development Engineer

- Developed high-speed digital video processing systems
- Developed video systems and architectures for satellite high resolution systems

EDUCATION

THE COOPER UNION SCHOOL OF ENGINEERING

New York, NY

M.S.E.E.

G.P.A.: 4.0/4.0 with thesis: *Voice Recognition System*

THE COOPER UNION SCHOOL OF ENGINEERING

New York, NY

B.S.E.E.

Summa Cum Laude

DISTINCTIONS

- 33 U.S. patents (4 additional patents filed) in the area of advanced television and HDTV
- Award-winning Consumer Electronics Transactions papers
- Tau Beta Pi, National Honor Society, College Treasurer
- Eta Kappa Nu, Electrical Engineering Honor Society, College Vice President
- The Cooper Union College Fellowship, Elks College Scholarship, NY State Regents Scholarship, National Merit Letter of Commendation
- General Excellence Award, Iona Preparatory High School

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SKILLS

- **Strong Video technical background:**
 - Proven digital and analog video display and processing innovator: 33 US patents issued; 4 additional patents pending
 - Expert on digital television research and architectures, MPEG
 - President of ACE Consulting, a video consulting business that delivers video expertise to top video and display product developers and holders of IP
 - Careers with Philips (Consumer Electronics and Semiconductors); CBS (studio equipment experience); and Key Digital Systems (home theater video products)
 - Validation and verification of system performance for Consumer Electronics video products
- **Strong and proven Product Development experience:**
 - Product development environments: large, small, Research, Predevelopment, advanced Development
 - Responsible for all aspects of Product Development:
 - Product specifications
 - Architecture and system design
 - Validation and verification test
 - Product manuals, training, and customer support
- **Strong and proven Project Management (PM) experience:**
 - PM experience with large, small, Research, Predevelopment, and advanced Development projects:
 - Hands-on; have delivered results on-time and within budget with project teams up to 20 staff and budgets over \$1 million
 - Member of Project Office; implemented process improvement and best practices
 - Generated and reviewed Project Management Plans, human resources, and budgets
 - Well-organized and can multi-task: have effectively led a multitude of simultaneous activities
 - Experience with Microsoft Project and all Microsoft Office tools
 - Attended American Management Association PM seminars
- **Excellent oral and written communication skills:**
 - Developed and presented technical seminars and product training
 - Authored product manuals, catalogs, press releases
 - Award-winning consumer electronics transactions papers
 - Detailed peer review of technical documentation; keen attention to detail
 - Expert MS Office skills: Word, Excel, PowerPoint
 - Retained professional title of Manager of Technical Communications
 - Critiqued many project proposals for technical accuracy and soundness of the business plan
- **Strong internal / external customer focus:**
 - Reporting project results to senior management and customers (internal and external)
 - Customer support provided for complete technical product line
 - Technical liaison between Research departments and client Corporate Intellectual Property department

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ALAN CAVALLERANO'S EXTERNALLY PUBLISHED PAPERS

<i>Grand Alliance HDTV Multi-Format Scan Converter</i> IEEE Transactions on Consumer Electronics, November 1995
<i>The U.S. HDTV Standard: The Grand Alliance</i> IEEE Spectrum, April 1995
<i>Grand Alliance MPEG-2-Based Video Decoder with Parallel Processing Architecture</i> International Journal of Imaging Systems and Technology, Winter 1994
<i>Baseband Video Processing and the Transmission of HDTV Signals</i> IEEE Transactions on Circuits and Systems for Video Technology, March 1991
<i>HDS/NA-6: A Simulcast HDTV System</i> IEEE Transactions on Consumer Electronics, August 1990
<i>System and Technological Details of Terrestrial/Cable NTSC-Compatible HDTV</i> IEEE Transactions on Consumer Electronics, August 1989 <i>Chester Sall Award for 1st-place manuscript</i>
<i>Decomposition and Recombination of a Wide Aspect Ratio Image for ENTSC Two-channel Television</i> IEEE Transactions on Consumer Electronics, August 1987 <i>Chester Sall Award for 3rd-best manuscript</i>
<i>Voice Recognition Telephone Dialing System</i> 1981 IEEE Region I Student Paper Transactions <i>1st-place paper</i>

ALAN CAVALLERANO

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33 PATENTS ISSUED

(while employed at Philips Electronics North America)

- #1. "Adaptive comb filter for artifact-free decoding"
July 11, 1989 Patent Number 4,847,682
- #2. "Method and apparatus for recombining a main panel component with an augmentation panel component to create a wide aspect ratio television display"
February 6, 1990 Patent Number 4,899,220
- #3. "Two-line MAC high definition television system"
March 13, 1990 Patent Number 4,908,697
- #4. "Method and apparatus for introducing a pan and scan feature to high definition television systems"
July 24, 1990 Patent Number 4,943,856
- #5. "HDNTSC channel with time and frequency multiplex"
July 31, 1990 Patent Number 4,945,411
- #6. "Training signal for maintaining the correct phase and gain relationship between signals in a two-signal high definition television system"
August 7, 1990 Patent Number 4,947,241
- #7. "Adaptive comb filter for artifact-free decoding"
December 18, 1990 Patent Number 4,979,023
- #8. "HDNTSC signal transmission and reception with time and frequency multiplexing"
January 8, 1991 Patent Number 4,984,067
- #9. "System for transmission and reception of a high definition time multiplexed analog component (HDMAC) television signal having an interlaced input/output format"
February 12, 1991 Patent Number 4,992,853
- #10. "High definition NTSC compatible television system with increased horizontal bandwidth and reduced color artifacts"
March 12, 1991 Patent Number 4,999,701
- #11. "Method and apparatus for demodulating color television chrominance signals"
November 19, 1991 Patent Number 5,067,011
- #12. "System for providing a high definition television (HDTV) augmentation channel comprising time and frequency multiplexed components"
February 11, 1992 Patent Number 5,087,970
- #13. "Two-line MAC high definition television system"
May 12, 1992 Patent Number 5,113,242
- #14. "Decomposition and recombination of a wide-aspect ratio image"
June 30, 1992 Patent Number 5,126,844
- #15. "Method and apparatus for transmitting augmentation panel components on one channel of a two channel wide aspect ratio television signal transmission system"
July 7, 1992 Patent Number 5,128,761
- #16. "Method and apparatus for the transmission and reception of a multicarrier digital television signal"
July 28, 1992 Patent Number 5,134,464

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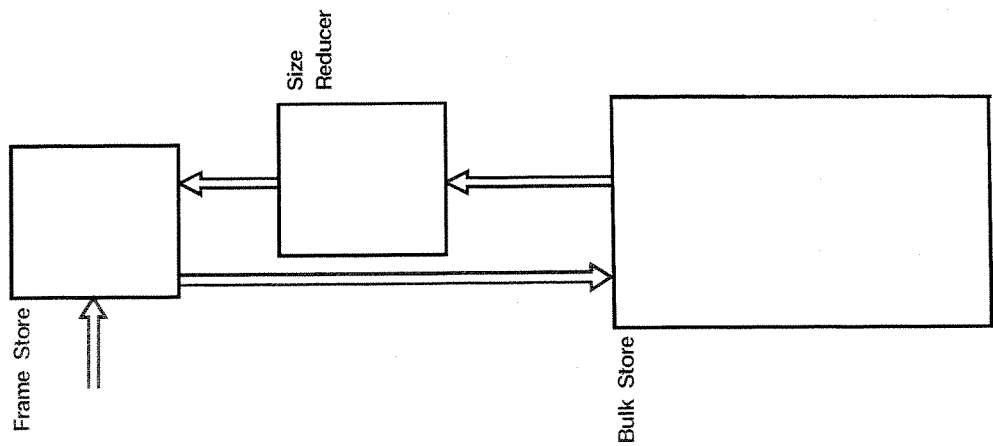
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- #17. "Method and apparatus for digitally processing a high definition television augmentation signal"
January 12, 1993 Patent Number 5,179,442
- #18. "Method and apparatus for the transmission and reception of a multicarrier high definition television signal"
May 25, 1993 Patent Number 5,214,501
- #19. "Method and apparatus for the transmission and reception of a multicarrier digital television signal"
January 25, 1994 Patent Number 5,282,019
- #20. "Method and apparatus for decoding digital video using parallel processing"
July 2, 1996 Patent Number 5,532,744
- #21. "Multi-frame-rate operation of digital light modulators"
March 17, 1998 Patent Number 5,729,243
- #22. "Distributed duty-cycle operation of digital light modulators"
May 12, 1998 Patent Number 5,751,264
- #23. "Method & apparatus for multi-standard digital television synchronization"
June 16, 1998 Patent Number 5,767,917
- #24. "Synchronization of multiple video and graphics sources with a display using a slow PLL approach"
June 22, 1999 Patent Number 5,914,757
- #25. "Method and apparatus for minimizing visual artifacts caused by the pixel display of a video image"
December 19, 2000 Patent Number 6,163,308
- #26. "Method and device for providing controlled access video signals without providing a signal in the clear (1)"
April 24, 2001 Patent Number 6,222,926
- #27. "Method and device for providing controlled access video signals without providing a signal in the clear (2)"
May 1, 2001 Patent Number 6,226,384
- #28. "Method and apparatus for preventing display screen burn-in"
July 17, 2001 Patent Number 6,262,772 B1
- #29. "A method and device for detecting an event in a program of a video and/or audio signal and for providing the program to a display upon detection of the event"
November 20, 2001 Patent Number 6,320,623 B1
- #30. "System and method for a video display screen saver"
November 26, 2002 Patent Number 6,486,900
- #31. "Multi-window PIP television with the ability to watch two sources of video while scanning an EPG"
November 26, 2002 Patent Number 6,493,038
- #32. "Method and apparatus for increasing the spatial resolution of a projected pixilated display"
June 10, 2003 Patent Number 6,575,576
- #33. "Chroma based adaptive signal peaking"
October 26, 2004 Patent Number 6,810,082

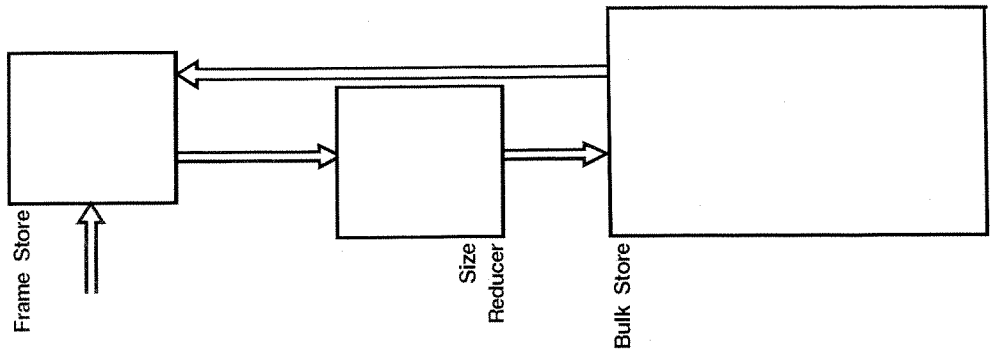
EXHIBIT B

PRIOR ART

'776 FIG. 18



'776 FIG. 19



INVENTION

'121 FIGURE

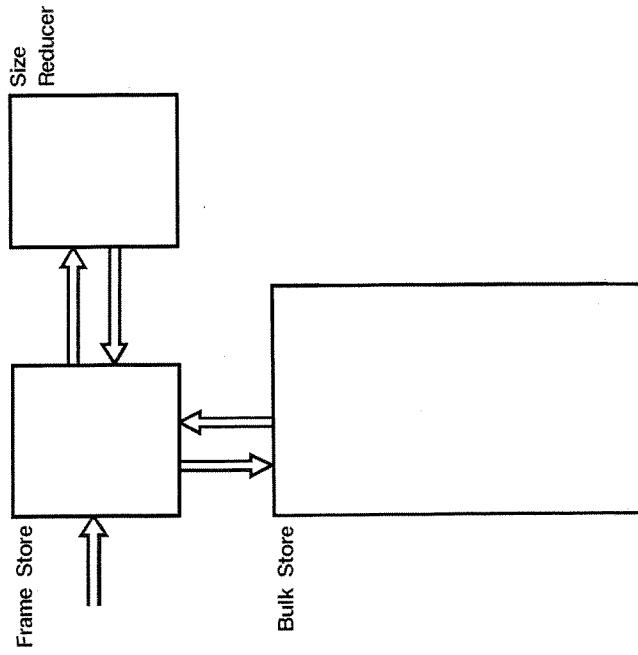
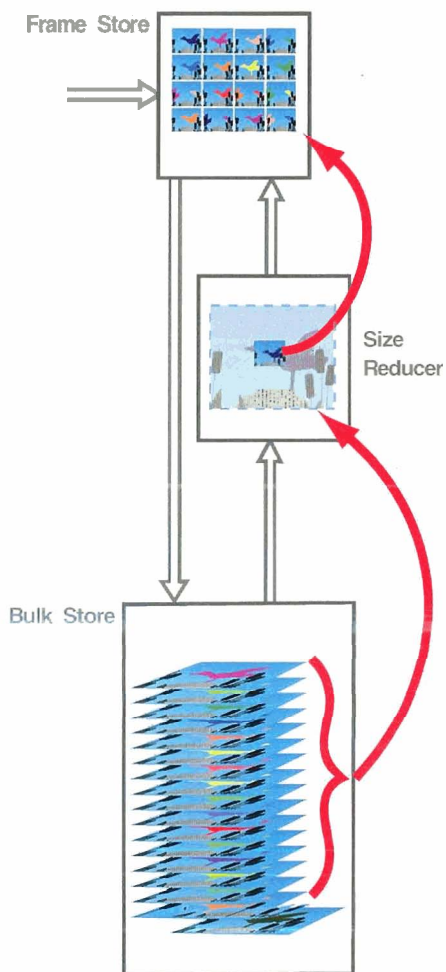


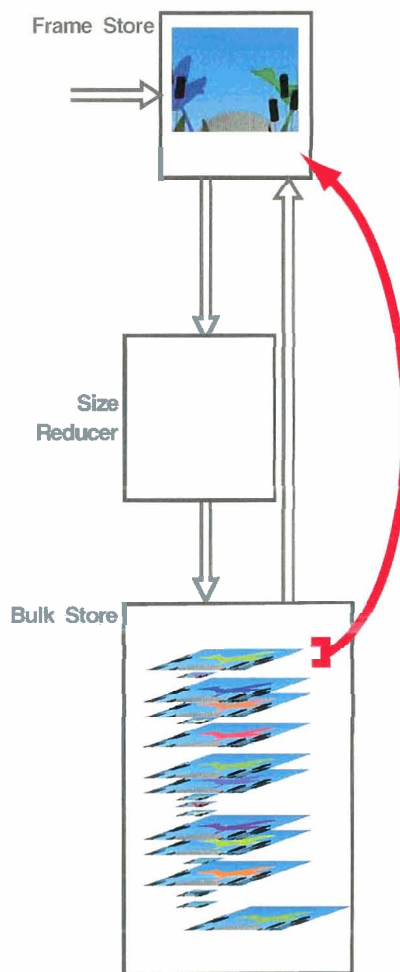
EXHIBIT C

PRIOR ART

'776 FIG. 18



'776 FIG. 19



INVENTION

'121 FIGURE

